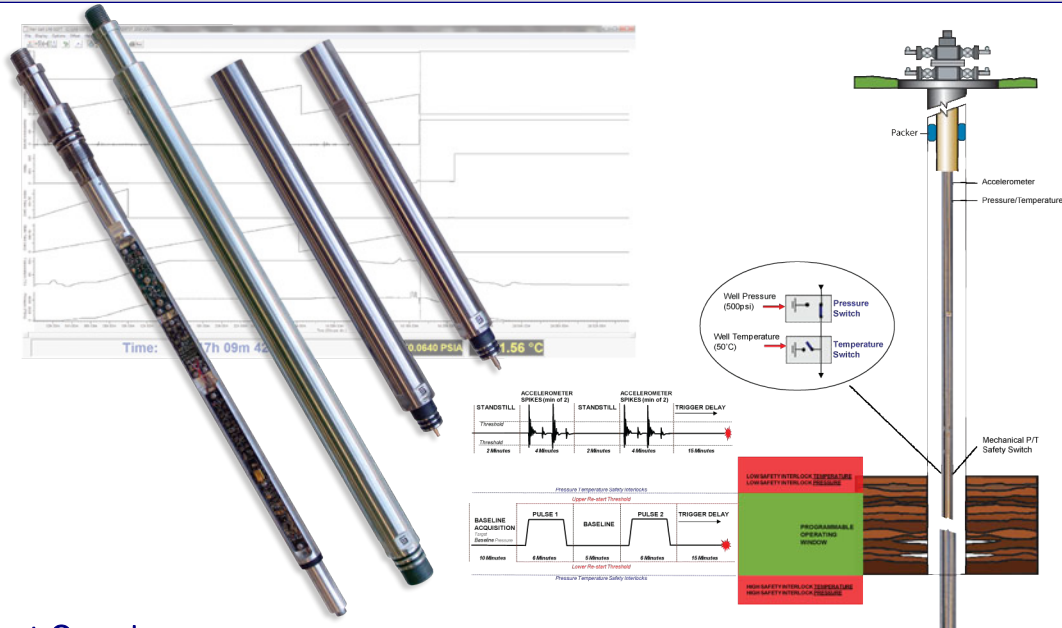




ELECTRONIC FIRING HEAD

Quick Change Trigger (QCT)

Spartek Systems specializes in providing the oil and gas industry with high quality data to monitor well performance and diagnose potential problems. Founded in 1994, Spartek Systems leads the industry in providing cost effective solutions for acquiring reliable well integrity data.



Product Overview

The Quick Change Trigger (QCT) is the next generation electronic firing head, designed to fulfill the need for a cost-effective triggering device, without compromising on safety or quality. The QCT is a memory based electronic trigger system specifically designed for initiating ballistic firing heads. The flexible design allows for multiple deployment options including Slick-line, TCP and Coiled Tubing.

The design concept is based on a field replaceable control cartridge. If required, this cartridge can be replaced quickly and easily at the well site. No special tools are required and training requirements are minimal.

The QCT firing sequence is programmable at surface for the relevant ballistic operations:

- ▶ Casing perforating
- ▶ Tubing punching
- ▶ Tubing cutting
- ▶ Plug/Packer setting
- ▶ Various other downhole operations

The QCT has redundant Failsafe capabilities!

Features and Applications

- ▶ Field replaceable control cartridge
- ▶ Quick & easy re-dress between runs
- ▶ Can be activated with positive or negative pressure pulse code e.g. TCP or Coiled Tubing Operations
- ▶ Program sequence can be aborted and restarted while downhole
- ▶ Can be activated with pre-programmed accelerometer burst e.g. Slickline Operations
- ▶ Accelerometer can be disabled for TCP operations
- ▶ Option available for long duration TCP battery pack
- ▶ Deploy and initiate industry standard ballistic devices
- ▶ API-RP67 Certified
- ▶ Vibration & Shock tested to 40G

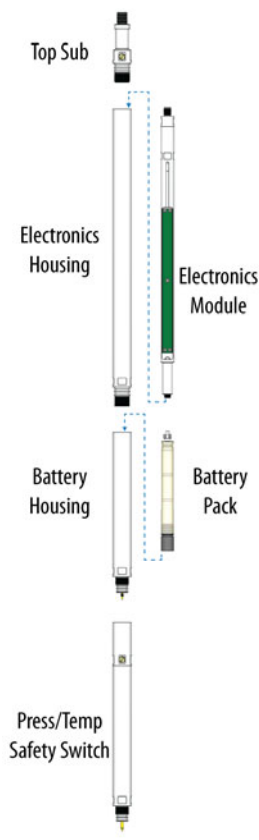
SPARTEK SYSTEMS

Providing Our Customers With "Best In Class" Technology

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Specifications:

NGE Quick Change Trigger (QCT)																	
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Specifications subject to change without notice

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